

IN THE SPECIFICATION:

Note that there are various program identifiers in the following paragraph that include underlining as part of the identifiers. **Such underlining is to remain in the following paragraph.** The only amendment in the following paragraph is the addition of a terminating quotation mark in the phrase: -- of the corresponding "image_area"--.

Please amend the paragraph on page 166 beginning at line 1 and ending at line 16 as follows:

(c) In another embodiment, denoted herein as the two tier strategy, both the original FOM MS location estimate and confidence as well as the "image_area" MS location estimate and a confidence are used. That is, two location hypotheses are provided for the target MS location, one having the FOM MS location estimate and one having the MS location estimate for "image_area". However, the confidences of each of these location hypotheses maybe reduced to reflect the resulting ambiguity of providing two different location hypotheses derived from the same FOM MS estimate. Thus, the computations for determining the confidence of "image_area" may be performed even though there are less than the minimally required archived FOM estimates nearby to the original FOM target MS estimate. In this embodiment, a weighting(s) may be used to weight the confidence values as, for example, by a function of the size of the "image_cluster_set". For example, if an original confidence value from the FOM was 0.76 and "area" contained only two-thirds of the minimally acceptable number, "min_clusters", then if the computation for a confidence of the corresponding "image_area" yielded a new confidence of 0.43, then a confidence for the original FOM target MS estimate may be computed as $[0.76 * (1/3)]$ whereas a confidence for the corresponding "image_area" may be computed as $[0.43 * (2/3)]$. However, it is within the scope of the present invention to use other computations for modifying the confidences used here. For example, tunable system coefficients may also be applied to the above computed confidences. Additionally, note that some embodiments may require at least a minimal number of relevant verified location signature clusters in the location signature data base before a location hypothesis utilizes the "image_area" as a target MS location estimate.

Please amend the paragraph on page 181 beginning at line 26 and ending on page 182,
line2 as follows:

$$\text{adjustment}_j^i = [D]\Delta a_j^i = \text{performance_value}_j * [D]\Delta a_{\text{REGION}}^{\text{MAX}}$$

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where a is the confidence value of a particular location hypothesis, performance_value is the value obtained from the Performance Database, $[D]\Delta a_{\text{REGION}}^{\text{MAX}}$ is a system parameter that accounts for how important the information is being considered by the context adjuster. Furthermore, this parameter is initially provided by an operator in, for example, a system start-up configuration and a reasonable value for this parameter is believed to be in the range 0.05 to 0.1, the subscript j represents a particular environmental factor, and the superscript i represents a particular First Order Model. However, it is an important aspect of the present invention that this value can be repeatedly altered by an adaptive mechanism such as a genetic algorithm for improving the MS location accuracy of the present invention. In this way, and because the rules are "written" using current performance information as stored in the Performance Database, the Rule Module is dynamic and becomes more accurate with time.